In the Claims

1-33 (Canceled).

34 (Previously Presented): A method of reducing chemotherapy-induced alopecia in a human patient or a mammalian animal to be subjected to chemotherapy treatment of a tumor not residing in the scalp or other region susceptible to chemotherapy-induced alopecia of the patient or the skin of the mammalian animal against chemotherapy-induced alopecia comprising:

a) administering a heat dose that causes an increase in the concentration of at least one stress protein selected from the group consisting of Hsp90, Hsp70, Hsp25-27 and P-glycoprotein in hair follicles residing in skin or scalp that is exposed to the heat dose and that produces an increased resistance of the hair follicles to chemotherapeutic drugs in the scalp or other region susceptible to chemotherapy-induced alopecia of a human patient or the skin of a mammalian; and

b) administering a chemotherapeutic drug to said human patient or said mammalian animal.

35 (Previously Presented): The method according to claim 34, wherein said administering the heat dose comprises heating hair follicles of the scalp of said human patient or the skin of said mammalian animal at about 39-45°C for about 15-120 minutes.

36 (Previously Presented): The method according to claim 34, wherein the heat dose is administered by a means selected from the group consisting of direct contact with heated surface or liquid, infrared radiation, microwave radiation, ultrasound and radiofrequency radiation.

37 (Previously Presented): The method according to claim 36, wherein the heat dose is administered by direct contact with a heated surface.

38 (Previously Presented): The method according to claim 36, wherein the heat dose is administered by direct contact with a heated liquid.

39 (Previously Presented): The method according to claim 36, wherein the heat dose is administered by a infrared radiation.

40 (Previously Presented): The method according to claim 36, wherein the heat dose is administered by microwave radiation.

41 (Previously Presented): The method according to claim 36, wherein the heat dose is administered by ultrasound.

42 (Previously Presented): The method according to claim 36, wherein the heat dose is administered by radiofrequency radiation.

43 (Previously Presented): The method according to claim 35, wherein the heat dose is administered by a means selected from the group consisting of direct contact with heated surface or liquid, infrared radiation, microwave radiation, ultrasound and radiofrequency radiation.

44 (Previously Presented): The method according to claim 43, wherein the heat dose is administered by direct contact with a heated surface.

45 (Previously Presented): The method according to claim 43, wherein the heat dose is administered by direct contact with a heated liquid.

46 (Previously Presented): The method according to claim 43, wherein the heat dose is administered by a infrared radiation.

47 (Previously Presented): The method according to claim 43, wherein the heat dose is administered by microwave radiation.

48 (Previously Presented): The method according to claim 43, wherein the heat dose is administered by ultrasound.

49 (Previously Presented): The method according to claim 43, wherein the heat dose is administered by radiofrequency radiation.

50 (Previously Presented): The method according to claim 35, said method consisting of:

a) administering a heat dose that causes an increase in the concentration of at least one stress protein selected from the group consisting of Hsp90, Hsp70, Hsp25-27 and P-glycoprotein in hair follicles residing in skin or scalp that is exposed to the heat dose and that produces an increased resistance of the hair follicles to chemotherapeutic drugs in the scalp or other region susceptible to chemotherapy-induced alopecia of a human patient or the skin of a mammalian animal; and

b) administering a chemotherapeutic drug to said human patient or said mammalian animal.

51 (Previously Presented): The method according to claim 50, wherein said administering the heat dose comprises heating hair follicles of the scalp of said human patient or the skin of said mammalian animal at about 39-45°C for about 15-120 minutes.

52 (Previously Presented): The method according to claim 50, wherein the heat dose is administered by a means selected from the group consisting of direct contact with heated surface or liquid, infrared radiation, microwave radiation, ultrasound and radiofrequency radiation.

53 (Previously Presented): The method according to claim 52, wherein the heat dose is administered by direct contact with a heated surface.

54 (Previously Presented): The method according to claim 52, wherein the heat dose is administered by direct contact with a heated liquid.

55 (Previously Presented): The method according to claim 52, wherein the heat dose is administered by a infrared radiation.

56 (Previously Presented): The method according to claim 52, wherein the heat dose is administered by microwave radiation.

57 (Previously Presented): The method according to claim 52, wherein the heat dose is administered by ultrasound.

58 (Previously Presented): The method according to claim 52, wherein the heat dose is administered by radiofrequency radiation.

59 (Previously Presented): The method according to claim 51, wherein the heat dose is administered by a means selected from the group consisting of direct contact with heated surface or liquid, infrared radiation, microwave radiation, ultrasound and radiofrequency radiation.

60 (Previously Presented): The method according to claim 51, wherein the heat dose is administered by direct contact with a heated surface.

61 (Previously Presented): The method according to claim 51, wherein the heat dose is administered by direct contact with a heated liquid.

62 (Previously Presented): The method according to claim 51, wherein the heat dose is administered by a infrared radiation.

63 (Previously Presented): The method according to claim 51, wherein the heat dose is administered by microwave radiation.

64 (Previously Presented): The method according to claim 51, wherein the heat dose is administered by ultrasound.

65 (Previously Presented): The method according to claim 51, wherein the heat dose is administered by radiofrequency radiation.

66 (Previously Presented): A method for protecting a human patient or a mammalian animal to be subjected to chemotherapy treatment of a tumor not residing in the scalp or other region susceptible to chemotherapy-induced alopecia of the patient or the skin of the animal against chemotherapy-induced alopecia, the protective method comprising administering a heat dose to the scalp or other region susceptible to chemotherapy-induced alopecia of the human patient or the skin of the animal whereby hair follicles in the scalp or other region susceptible to chemotherapy-induced alopecia of the patient or the skin of the animal are heated to and maintained at a temperature of about 39-45°C for about 15-120 minutes and administering a chemotherapeutic drug to said human patient or mammalian animal.

67 (Previously Presented): The method of claim 66, wherein the heat dose is administered by a means selected from the group consisting of direct contact with heated surface or liquid, infrared radiation, microwave radiation, ultrasound and radiofrequency radiation.

68 (Previously Presented): The method according to claim 67, wherein the heat dose is administered by direct contact with a heated surface.

69 (Previously Presented): The method according to claim 67, wherein the heat dose is administered by direct contact with a heated liquid.

70 (Previously Presented): The method according to claim 67, wherein the heat dose is administered by a infrared radiation.

71 (Previously Presented): The method according to claim 67, wherein the heat dose is administered by microwave radiation.

72 (Previously Presented): The method according to claim 67, wherein the heat dose is administered by ultrasound.

73 (Previously Presented): The method according to claim 67, wherein the heat dose is administered by radiofrequency radiation.

74 (Previously Presented): The method according to claim 66, said method consisting of administering a heat dose to the scalp or other region susceptible to chemotherapy-induced alopecia of the human patient or the skin of the animal whereby hair follicles in the scalp or other region susceptible to chemotherapy-induced alopecia of the patient or the skin of the animal are heated to and maintained at a temperature of about 39-45°C for about 15-120 minutes and administering a chemotherapeutic drug to said human patient or mammalian animal.

75 (Previously Presented): A method for protecting a human patient or a mammalian animal to be subjected to chemotherapy treatment of a tumor not residing in the scalp or other region susceptible to chemotherapy-induced alopecia of the patient or the skin of the animal against chemotherapy-induced alopecia, the protective method comprising administering a heat dose to the scalp or other region susceptible to chemotherapy-induced alopecia of the patient or the skin of the animal, wherein the effective heat dose is a dose equal or greater to that required to cause an increase in the concentration of a stress protein selected from the group consisting of Hsp90, Hsp70, Hsp25-27 and P-glycoprotein in cells of hair follicles and administering a chemotherapeutic agent to said human patient or said mammalian animal.

76 (Previously Presented): The method according to claim 75, wherein said administering the heat dose comprises heating hair follicles of the scalp of said human patient or the skin of said mammalian animal at about 39-45°C for about 15-120 minutes.

77 (Previously Presented): The method according to claim 75, wherein the heat dose is administered by a means selected from the group consisting of direct contact with heated surface or liquid, infrared radiation, microwave radiation, ultrasound and radiofrequency radiation.

78 (Previously Presented): The method according to claim 77, wherein the heat dose is administered by direct contact with a heated surface.

79 (Previously Presented): The method according to claim 77, wherein the heat dose is administered by direct contact with a heated liquid.

80 (Previously Presented): The method according to claim 77, wherein the heat dose is administered by a infrared radiation.

81 (Previously Presented): The method according to claim 77, wherein the heat dose is administered by microwave radiation.

82 (Previously Presented): The method according to claim 77, wherein the heat dose is administered by ultrasound.

83 (Previously Presented): The method according to claim 77, wherein the heat dose is administered by radiofrequency radiation.

84 (Previously Presented): The method according to claim 76, wherein the heat dose is administered by a means selected from the group consisting of direct contact with heated surface or liquid, infrared radiation, microwave radiation, ultrasound and radiofrequency radiation.

85 (Previously Presented): The method according to claim 84, wherein the heat dose is administered by direct contact with a heated surface.

86 (Previously Presented): The method according to claim 84, wherein the heat dose is administered by direct contact with a heated liquid.

87 (Previously Presented): The method according to claim 84, wherein the heat dose is administered by a infrared radiation.

88 (Previously Presented): The method according to claim 84, wherein the heat dose is administered by microwave radiation.

89 (Previously Presented): The method according to claim 84, wherein the heat dose is administered by ultrasound.

90 (Previously Presented): The method according to claim 84, wherein the heat dose is administered by radiofrequency radiation.

91 (Previously Presented): The method according to claim 75, said method consisting of administering a heat dose to the scalp or other region susceptible to chemotherapy-induced alopecia of the patient or the skin of the animal, wherein the effective heat dose is a dose equal or greater to that required to cause an increase in the concentration of a stress protein selected from the group consisting of Hsp90, Hsp70, Hsp25-27 and P-glycoprotein in cells of hair follicles and administering a chemotherapeutic agent to said human patient or said mammalian animal.

92 (New). The method according to claim 34, wherein said administering the heat dose comprises heating hair follicles of the scalp of said human patient or the skin of said mammalian

animal at about 39-45°C for about 15-120 minutes and said chemotherapeutic drug is administered between about 2 hours and 24 hours after said heat dose is administered.

93 (New). The method according to claim 34, wherein said chemotherapeutic drug is administered between 2 and 24 hours after said heat dose is administered.

94 (New). The method according to claim 66, wherein said chemotherapeutic drug is administered between 2 and 24 hours after said heat dose is administered.

95 (New). The method according to claim 75, wherein said administering the heat dose comprises heating hair follicles of the scalp of said human patient or the skin of said mammalian animal at about 39-45°C for about 15-120 minutes and said chemotherapeutic drug is administered between about 2 hours and 24 hours after said heat dose is administered.

96 (New). The method according to claim 75, wherein said chemotherapeutic drug is administered between 2 and 24 hours after said heat dose is administered.

97 (New). The method according to claim 91, wherein said chemotherapeutic drug is administered between 2 and 24 hours after said heat dose is administered.

98 (New). The method according to claim 91, wherein said hair follicles of the scalp of said human patient or the skin of said mammalian animal is heated at about 39-45°C for about 15-120 minutes and said chemotherapeutic drug is administered between about 2 hours and 24 hours after said heat dose is administered.